DETAILED ACTION

Response to Amendment

This is in response to an amendment/response filed on July 14th s011.

No Claims have been amended.

Claims 32-49 have been cancelled.

No Claims have been added.

Claims 1 - 31 are currently pending.

Response to Arguments

Applicant's arguments with respect to claims 1-31 have been considered but are

moot in view of the new ground(s) of rejection.

1.   Applicant's request for reconsideration of the finality of the rejection of the last

Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

        1.   Determining the scope and contents of the prior art.
        2.   Ascertaining the differences between the prior art and the claims at issue.
        3.   Resolving the level of ordinary skill in the pertinent art.

        4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

4.   This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5.   Claims 1,2,11,12,18,19,25,and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willard et al. (US Patent 4,803,487, hereinafter Willard) in view of Koenck et al. (US Patent 5,128,187, hereinafter Koenck)

    Regarding claims 1, 11, 18, 25 and 26, Willard discloses a system for use in a communication network having a plurality of subnetworks **(Fig. 1, Fig. 2 and Fig. 4, Where the first communication channel 14 and second communication channel 20 are considered as the plurality of subnetwork),** the system comprising:

    A mobile computing device **(16)** Comprising:

    a base module **(206)** comprising a base processing unit **(208)** operable on data in accordance with a set of communication software routines **(Col. 3, lines 65 – Col. 4, lines 35 and Col. 8, lines 23-55 , which recites receives and detects data according a communication channel); and**

a communication processor **(436)** comprising: a first communication transceiver **(204,442)** comprising a first operating characteristic to conduct data communications on a first of the plurality of subnetworks **(Col. 3, lines 68 -col. 4, lines 7 and Col. 8, lines 23 43, which recites communication over channel communication 14 considered as a first operating characteristic over a first subnetwork);** and a second communication transceiver **(218,446)** comprising a second operating characteristic to conduct data communications on a second of the plurality of subnetworks **(Col. 4, lines 32-35 and Col. 9, lines 37 -45, which recites transmitting data over second communication channel 20 considered as the second operating characteristic),** the second operating characteristic being different from the first operating characteristic and the second subnetwork being different from the first subnetwork **(Col 3, lines 44-51 and Col. 6, lines 19-25, which recites the firs communication channel 14 is synchronous or asynchronous signaling format and the second communication channel 20 is a low power signals, thereby having different characteristics and physically different from each other).**

Willard does not explicitly disclose the conversion of data received by the first and second communication transceivers to a format for processing by the base processing unit in accordance with the set of communicating software routines and for converting data processed by the base processing unit to a format for transmission by a selected one of the first and second communication transceivers

However, Koenck teaches a portable device that used for conversion of data received by the first and second communication transceivers to a format for processing

by the base processing unit **(104)** in accordance with the set of communicating software

routines and for converting data processed by the base processing unit **(104)** to a

format for transmission by a selected one of the first and second communication

transceivers, thereby isolating the base processing unit from differences between the

first and second operating characteristics of the first and second communication

transceivers**(See Col.8, lines 18 -25).**

Therefore, , it would have been obvious to one of ordinary skill in the art at the

time the invention was made to combine the teaching of Koenck into the teaching of

Willard to efficiently convert data received by the first and second communication

transceivers to a format for processing by the base processing unit in accordance with

the set of communicating software routines and for converting data processed by the

base processing unit to a format for transmission by a selected one of the first and

second communication transceivers with the motivation to speed up the processing time

in the base unit.

Regarding claims 2, 12 and 19, Willard discloses the portable data collection

terminal of claim 1 as addressed above, except wherein the communication processor

comprises:

a first processing unit connected between the base processing unit and the first

communication transceiver for converting data received by the first communication

transceiver to a format for processing by the base processing unit in accordance with

the set of communication software routines and for converting data processed by the

base processing unit to a format for transmission by the first communication

transceiver and a second processing unit connected between the base processing unit and the second communication transceiver for converting data received by the second communication transceiver to a format for processing by the base processing unit in accordance with the set of communication software routines and for converting data processed by the base processing unit to a format for transmission by the second communication transceiver.

However, Koenck teaches a first processing unit connected between the base processing unit(**125**) and the first communication transceiver(**128**) for converting data received by the first communication transceiver to a format for processing by the base processing unit in accordance with the set of communication software routines and for converting data processed by the base processing unit to a format for transmission by the first communication transceiver(**106**) and a second processing unit (**105**)connected between the base processing unit and the second communication transceiver for converting data received by the second communication transceiver to a format for processing by the base processing unit in accordance with the set of communication software routines and for converting data processed by the base processing unit to a format for transmission by the second communication transceiver(**Col. 7, lines 59 – Col. 8, lines 25).**

Therefore, , it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Koenck into the teaching of Willard to efficiently convert data received by the first and second communication transceivers to a format for processing by the base processing unit in accordance with

the set of communicating software routines and for converting data processed by the

base processing unit to a format for transmission by a selected one of the first and

second communication transceivers with the motivation to speed up the processing

time in the base unit.

6.   Claims 3, 4, 5,9,10,13,17,20,24,27,31 and 35are rejected under 35 U.S.C. 103(a)

as being unpatentable over Willard in view of Koenck as applied above, and further in

view of Tymes.

       Regarding claims 3, 13, 20 and 27, Tymes discloses the system of claim 1

wherein the first communication transceiver operates in a wired subnetwork (network

11) and the second communication transceiver operates in a wireless subnetwork **(Fig.

1, wireless network between base station 13 and terminal 15 and other base

stations)**.

       Therefore, , it would have been obvious to one of ordinary skill in the art at the

time the invention was made to combine the teaching of Tymes into the teaching of

Willard and Koenck to efficiently convert data received by the first and second

communication transceivers to a format for processing by the base processing unit in

accordance with the set of communicating software routines and for converting data

processed by the base processing unit to a format for transmission by a selected one

of the first and second communication transceivers with the motivation to speed up the

processing time in the base unit.

       Regarding claims 4 and 35, Tymes discloses the system of claim 3 wherein the

wireless subnetwork comprises a backup network in the event of a failure in the wired

subnetwork **(Fig. 1, where the RF network between base station 14 and base**

station 13 is considered as the backup network).

       Therefore, , it would have been obvious to one of ordinary skill in the art at the

time the invention was made to combine the teaching of Tymes into the teaching of

Willard and Koenck to efficiently convert data received by the first and second

communication transceivers to a format for processing by the base processing unit in

accordance with the set of communicating software routines and for converting data

processed by the base processing unit to a format for transmission by a selected one of

the first and second communication transceivers with the motivation to speed up the

processing time in the base unit.

       Regarding claim 5, Tymes discloses that network 11 may use protocol such as

time slot sharing (TDM), Ethernet or token ring (col. 6, lines 48-62). Testing is old and

well known in the art of time slot sharing, Ethernet or Token Ring. Since the claim uses

the phrase "is operable to test...", the testing is not required for the claim. Only the

ability to operate to test is required. Thus, since testing is Testing is old and well known

in the art of time slot sharing, Ethernet or Token Ring, it would have been obvious to

one of ordinary skilled in the art to include network testing in the system of Tymes to

make sure network 11 is working and enhance network transmission reliability.

       Therefore, , it would have been obvious to one of ordinary skill in the art at the

time the invention was made to combine the teaching of Tymes into the teaching of

Willard and Koenck to efficiently convert data received by the first and second

communication transceivers to a format for processing by the base processing unit in

accordance with the set of communicating software routines and for converting data

processed by the base processing unit to a format for transmission by a selected one of

the first and second communication transceivers with the motivation to speed up the

processing time in the base unit.

Regarding claims 9, 17, 24 and 31, Tymes discloses the system of claim 1

wherein the communication processor further includes means for relaying

communication received by one of its first and second communication transceivers for

retransmission by the other of its second and first communications transceivers **(Col. 7,**

lines 63 – 66).

Therefore, , it would have been obvious to one of ordinary skill in the art at the

time the invention was made to combine the teaching of Tymes into the teaching of

Willard and Koenck to efficiently convert data received by the first and second

communication transceivers to a format for processing by the base processing unit in

accordance with the set of communicating software routines and for converting data

processed by the base processing unit to a format for transmission by a selected one of

the first and second communication transceivers with the motivation to speed up the

processing time in the base unit.

Regarding claim 10, Tymes discloses In the communication network of claim 1

including a computer and a plurality of mobile of computing device **(Fig. 1,13)** each

coupled to the plurality of subnetworks **(11, and RF networks)** and wherein at least one

of the communication transceivers of each of the portable data collection terminals

operates in a wireless subnetwork, the communication processor of each data collection

terminal being responsive to an out-of- range condition for the respective portable data

collection terminal to initiate data communications by its said one communication

transceiver to another of the plurality of portable data collection terminals, the other of

the data collection terminals relaying data communications between the computer and

the first-named data collection terminal**(Col. 21, lines 24 - 55).**

Therefore, , it would have been obvious to one of ordinary skill in the art at the

time the invention was made to combine the teaching of Tymes into the teaching of

Willard and Koenck to efficiently convert data received by the first and second

communication transceivers to a format for processing by the base processing unit in

accordance with the set of communicating software routines and for converting data

processed by the base processing unit to a format for transmission by a selected one of

the first and second communication transceivers with the motivation to speed up the

processing time in the base unit.

7.   Claims 8, 16, 23 and 30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Willard in view of Koenck, and further in view of Wang (5,765,027).

Regarding claims 8, 16, 23 and 30, Willard combines with Koenck doe not

teach that the communication module is housed in a PCMCIA card. However, Wang

teaches that a communication module can be housed on a PCMCIA card for portability

and expandability purposes. Thus, it would have been obvious to one of ordinary skilled

in the art to apply Wang teaching of housing a communication module on a PCMCIA

card with the motivation being to enhance portability and expandability.

Allowable Subject Matter

6.   Claims 6-7, 14-15, 21-22 and 28-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DADY CHERY whose telephone number is (571)270-1207. The examiner can normally be reached on Monday - Thursday 8 am - 4 pm ESt.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D. VU can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner, Art Unit 2416

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